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A contribution for a more accurate estimation of the incidence of Kaposi sarcoma in Mozambique

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Dear Editor,

Kaposi's sarcoma (KS) is a malignant vascular neoplasm caused by *Human Herpes virus type 8* (HHV-8) infection and has been classified as an AIDS-defining condition. Although KS was observed in Africa before the AIDS epidemic, in the African-endemic form, its incidence became substantially higher with the increasing frequency of HIV infection. In several African settings, it is now the most frequent cancer in men and ranks second among women.¹

In 2009, the prevalence of HIV was 11.5% (13.1% in women and 9.2% in men) in the Mozambican population aged 15–49 years.² The GLOBOCAN project estimated an overall number of 2,756 cases of KS for Mozambique in 2008, corresponding to crude incidence rates of 16.4/100,000 men and 8.5/100,000 women, and age-standardized rates (world standard population) of 22.7/100,000 men and 9.6/

100,000 women.³ It was estimated to be the most frequent among men and the second in women. These figures, however, were obtained as a weighted average of estimates for the neighboring countries Malawi, Tanzania, and Zimbabwe.³

Here, we present local data on the observed incident cases of KS. Population-based cancer incidence data are available since 2005 from the Cancer Registry of Beira (ROB),⁴ a city in the province of Sofala, with an estimated population of approximately 450 thousand inhabitants in 2008.⁵ Data are also available from the Pathology Department of the Maputo Central Hospital (DP-HCM); this 1,500-bed hospital provides the most specialized level of care in Mozambique and is the national referral center. The DP-HCM receives virtually all the specimens from Maputo City, with nearly 1.13 million inhabitants.⁶

Table 1. All cases of cancer and cases of Kaposi sarcoma registered by the population-based Cancer Registry of the city of Beira and diagnosed at the Pathology Department of the Maputo Central Hospital, among patients from Maputo City, in women and men (all ages)

	Year of data collection										
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Beira											
All cancers											
Women	–	–	–	–	–	185	217	155	166	185	220
Men	–	–	–	–	–	171	160	116	166	218	175
Kaposi sarcoma											
Women	–	–	–	–	–	82	60	40	35	56	57
Men	–	–	–	–	–	106	88	61	112	129	99
Maputo											
All cancers ¹											
Women	319	304	329	357	668	572	649	690	747	777	877
Men	229	253	256	347	495	448	564	553	616	596	630
Kaposi sarcoma											
Women	23	23	23	29	60	53	75	89	73	87	122
Men	47	35	47	74	93	89	108	132	101	131	174

¹Excluding non-melanoma skin cancers.

The ROB searches actively for the incident cases of cancer in the central hospital, other public health care institutions and private clinics in the city of Beira, and the deaths due to oncological causes as depicted in the death certificate, which contributes to the completeness of the registration. However, the registry was set-up recently and is still improving the procedures for identification of cases in different institutions, and its results also reflect the expectedly low intensity of diagnosis of several cancers, namely those requiring more specialized means. The records of the DP-HCM comprise data from virtually all the patients with an anatomopathological diagnosis (histology, cytology or autopsy) living in Maputo city, although no information is available regarding liquid tumors diagnosed at the Department of Clinical Pathology and Hematology of the HCM, or patients with clinical diagnosis only. Although these sources may be expected to underestimate the incidence of cancer in the populations of the respective catchment areas, especially for Maputo City, they provide lower bound estimates of the number of incidence cases in these regions.

In the most recent years, KS was the most frequent cancer among men and the second in women, both in Beira and in Maputo. Table 1 shows a generally increasing trend in the number of incident cases of cancer since 2000. This may be explained changes in the risk and awareness of the population for oncological diseases, especially those related with AIDS, and in the resources available for diagnosis in these settings. In Beira and Maputo, the age-standardized annual incidence rates in the period 2007–2009 were 25.2/100,000 in men and 14.2/100,000 in women, when using the age-structure of the national population estimates for 2008 as reference,⁷ and 34.2/100,000 in men and 16.2/100,000 in women, when using the world standard population as reference.^{8,9} Although HIV infection is more prevalent in Sofala and Maputo city than in the whole country (15–49 years: Maputo city, 16.8%; Sofala, 15.5%²), the rates computed using data from the ROB and the DP-HCM, expected to underestimate the true incidence, are more than 1.5-fold higher than those presented by GLOBOCAN.

In conclusion, our results on KS show that the burden of AIDS-related cancers in Mozambique may be higher than expected based on sources from neighboring countries. The

locally available population- and hospital-based data may be used for a more accurate estimation of the burden of cancer in this African setting.

Yours sincerely,
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DOI: 10.1002/ijc.27714

History: Received 14 Jun 2012; Accepted 18 Jun 2012; Online 9 Jul 2012

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